

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) Customer Premises Equipment (CPE) for operation with a Cable Modem Termination System (CMTS), the CMTS configured to output out-of-band (OOB) messages and downstream channel descriptor (DCD) messages over a cable network, the OOB messages being outputted over one or more one-way data tunnels where each data tunnel is identified with a network address, each DCD message being outputted over downstream channels and identifying at least a portion of the network addresses associated with the tunnels provided by the CMTS, the An apparatus CPE comprising:

an embedded settop box (eSTB) device configured to output a customer premises equipment (CPE) identifier; and

an embedded cable modem (eCM) in communication with the eSTB device, the eCM/modem receiving the CPE identifier and configured to scan downstream channels of the a information distribution system CMTS for a matching downstream channel descriptor (DCD) message, the matching DCD message having a DCD message identifier that matches the CPE identifier, the eCM/modem tuning to the one or more tunnels identified in the matching DCD message and delivering the out-of-band (OOB) messages included in the tuned-to tunnels to the eSTB device,

wherein the information distribution system is configured to output the out-of-band (OOB) messages and the downstream channel descriptor (DCD) messages over a network, the OOB messages over the one or more tunnels where each tunnel is identified with a network address, and each DCD message over downstream channels and

wherein each DCD message identifies at least a portion of the network addresses associated with the one or more tunnels provided by the information distribution system and includes a listing of tunnel types and a listing of tunnel type identifiers for differentiating between different tunnels identified with a same tunnel type.

2. (Currently Amended) The CPE apparatus of claim 1 wherein the eSTB device remains

tuned to the one or more tunnels identified in the ~~matched~~-matching DCD message if an interrupt occurs to the tuned to tunnels.

3. (Currently Amended) The ~~CPE~~-apparatus of claim 2 wherein the ~~eSTB~~device remains tuned to the one or more tunnels identified in the matching DCD message as long as the matching DCD message is being received by the ~~eCM~~modem.

4. (Currently Amended) The ~~CPE~~-apparatus of claim 1 wherein the network addresses are media access control (MAC) addresses.

5. (Currently Amended) The ~~CPE~~-apparatus of claim 1 wherein the CPE identifier is a tunnel identifier associated with one of the network addresses in the DCD message.

6. (Currently Amended) The ~~CPE~~-apparatus of claim 5 wherein the tunnel identifier is a conditional access tunnel identifier.

7. (Currently Amended) The ~~CPE~~-apparatus of claim 6 wherein the conditional access tunnel identifier is associated with a conditional access identification of a vendor of the CPE.

8. (Currently Amended) A ~~eable~~-system for Out-Of-Band (OOB) messaging, the system comprising:

a ~~information distribution system~~Cable Modem Termination System (CMTS), the ~~information distribution system~~CMTS configured to output OOB messages and downstream channel descriptor (DCD) messages over a ~~eable~~-network, the OOB messages being outputted over one or more one-way data tunnels where each data tunnel is identified with a network address, each DCD message being outputted over downstream channels and identifying at least a portion of the network addresses associated with the tunnels provided by the information distribution systemCMTS, each DCD message also including a listing of tunnel types and a listing of tunnel type identifiers for differentiating between different tunnels identified with a same tunnel type.; and

Customer Premises Equipment (CPE) having an ~~embedded set-top box~~ (~~eSTB~~)device

configured to output a CPE identifier and an ~~embedded cable~~ modem (eCM) in communication with the eSTB device, the eCM modem receiving the CPE identifier and configured to scan downstream channels of the information distribution system ~~CMTS~~ for a matching DCD message, the matching DCD message having a DCD message identifier that matches the CPE identifier, the eCM modem tuning to the tunnels specified in the matching DCD message and delivering the OOB messages included in the tuned-to tunnels to the eSTB device.

9. (Currently Amended) The system of claim 8 wherein the eSTB device remains tuned to the tunnels identified in the matching DCD message if an interrupt occurs to the tuned-to tunnels.

10. (Currently Amended) The system of claim 9 wherein the eSTB device remains tuned to the tunnels identified in the matching DCD message as long as the matching DCD message is being received by the eCM modem.

11. (Original) The system of claim 8 wherein the network addresses are media access control (MAC) addresses.

12. (Original) The system of claim 8 wherein the CPE identifier is a tunnel identifier associated with one of the network addresses in the DCD message.

13. (Previously Presented) The system of claim 12 wherein the tunnel identifier is a conditional access tunnel identifier.

14. (Previously Presented) The system of claim 13 wherein the conditional access tunnel identifier is associated with a conditional access identification of a vendor of the CPE.

15. (Currently Amended) ~~For use with Customer Premises Equipment (CPE) having an embedded set-top box (eSTB) and an embedded cable modem (eCM), a method for Out-Of-Band (OOB) messaging, the~~ A method comprising:

receiving out-of-band (OOB) messages and downstream channel descriptor (DCD) messages, the OOB messages being outputted over one or more one-way data tunnels where

each data tunnel is identified with a network address, the DCD messages being outputted over downstream channels and each including at least a portion of the network addresses associated with the tunnels provided by the a information distribution system ~~CMTS~~, each DCD message also including a listing of tunnel types and a listing of tunnel type identifiers for differentiating between different tunnels identified with a same tunnel type;

scanning downstream channels of the information distribution system ~~CMTS~~ with the a modem (eCM) for the DCD messages;

determining if one of the scanned channels includes a matching DCD message, the matching DCD ~~messaging message~~ having a DCD message identifier that matches a customer premises equipment (CPE) identifier; and

controlling the eCM/modem to tune to the tunnels specified in the matching DCD message and to deliver the OOB messages included in the tuned-to tunnels to the a eSTB device.

16. (Original) The method of claim 15 further comprising remaining tuned to the tunnels identified in the matching DCD message if an interrupt occurs to the tuned-to tunnels.

17. (Currently Amended) The method of claim 15 further comprising remaining tuned to the tunnels identified in the matching DCD message as long as the matching DCD message is being received by the eCM/modem.

18. (Currently Amended) The method of claim 15 further comprising outputting the CPE identifier from the eSTB device to the eCM/modem such that the eCM/modem determines whether the scanned channels include the matching DCD message.

19. (Currently Amended) The method of claim 15 further comprising outputting the CPE identifier from a conditional access unit of the CPE to the eCM/modem such that the eCM/modem determines whether the scanned channels include the matching DCD message.

20. (Currently Amended) The method of claim 15 wherein determining whether the scanned channels include the matching DCD message includes outputting the DCD message identifier included in the DCD messages of the scanned channels to the eSTB device such that the

eSTBdevice determines whether the DCD message identifier matches the CPE identifier.

21. (Original) The method of claim 15 wherein determining whether the scanned channels include the matching DCD message includes outputting the DCD message identifier included in the DCD messages of the scanned channels to a conditional access unit of the CPE such that the conditional access unit determines whether the DCD message identifier matches the CPE identifier.

22. (Original) The method of claim 15 further comprising associating the network addresses with media access control (MAC) addresses.

23. (Original) The method of claim 15 further comprising associating the CPE identifier with a tunnel identifier of one of the network addresses in the DCD message.

24. (Original) The method of claim 23 further comprising associating the tunnel identifier with a conditional access tunnel identifier.

25. (Original) The method of claim 24 further comprising associating the conditional access tunnel identifier with a conditional access identification of a vendor of the CPE.

26. (Currently Amended) ~~Customer-Premises Equipment (CPE) for operation with a Cable Modem Termination System (CMTS), the CMTS configured to output out-of-band (OOB) messages and downstream channel descriptor (DCD) messages over a cable network, the OOB messages being outputted over one or more one-way data tunnels where each data tunnel is identified with a network address, each DCD message being outputted over downstream channels and identifying at least a portion of the network addresses associated with the tunnels provided by the CMTS, the CPE~~An apparatus comprising:

a an embedded cable modem (eCM) configured to scan downstream channels of the a information distribution systemCMTS for downstream channel descriptor (DCD) messages and to output the a DCD message identifier included in the DCD message; and

an embedded set-top box (eSTB)device configured to determine whether the DCD

message identifier matches with a customer premises equipment (CPE) identifier such that the eSTBdevice instructs the eCMmodem to continue scanning of the DCD messages if the DCD message identifier fails to match the CPE identifier and to tune to the one or more tunnels identified by the network address in the DCD message if the DCD message identifier matches with the CPE identifier-₂

wherein the information distribution system is configured to output out-of-band (OOB) messages and the downstream channel descriptor (DCD) messages over a network, the OOB messages over the one or more tunnels where each tunnel is identified with the network address, and each DCD message over downstream channels and wherein each DCD message identifies at least a portion of the network addresses associated with the one or more tunnels provided by the information distribution system and includes a listing of tunnel types and a listing of tunnel type identifiers for differentiating between different tunnels identified with a same tunnel type.

27. (Currently Amended) The CPE-apparatus of claim 26 wherein the eSTBdevice includes a conditional access unit to determine whether the DCD message identifier matches with the CPE identifier.

28. (Currently Amended) The CPE-apparatus of claim 26 wherein the eSTBdevice communicates with a conditional access unit to determine whether the DCD message identifier matches with the CPE identifier.

29. (New) The apparatus of claim 26, wherein the device comprises a set top box.

30. (New) The apparatus of claim 26, wherein the modem comprises a cable modem.

31. (New) The apparatus of claim 26, wherein the information distribution system comprises a cable modem termination system.